

Make in India: Large Scale Textile manufacturing in India needs Textile Education centre to train Entrepreneurs to invest in New Technology

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Abstract

Textile Educational Institutes and Research Institutes need to work unitedly to develop Technical Human Capital and Next Generation of Entrepreneurs to invest in new Technology to develop Textile Industry in India. Textile Industry needs to promote R and D to develop new products by Training Human capital in association with Textile Educational Institutes and Research Institutes. Textile Industry Participation in Textile Research and education is mandatory for development of the Technical human capital to optimize the utilization of the Textile Machinery & Technology of the processing of the fibres and Technical man power. Technical personnel is nodal in utilizing men, machine and raw material in enhancing the productivity and quality. Any new Technology needs technically competent Entrepreneurs. At present Entrepreneurs are running the business as family business with the use of unskilled personnel. Technically skilled personnel are rarely used. Textile Industry in India is very big and it is second largest employment provider in India. Even though it is biggest in India it needs sustainable System to give inclusive growth to Business. Industry has best Real estate investment and Infrastructure. Technology in Textile has not kept pace with modernization happening all over the world Textile Industry due to lack of Entrepreneurs to reinvest profits in Textiles Industry development. This is due to better investment opportunities in other sector and lack of proper education and R and D in the country.

I. Introduction

Major Textile production happens in decentralized sector of the Textile Industry in India. Even though India has best spinning capacity, Technology as well as maximum no of spindles, this advantage is fully not utilized by the Textile Industry in India. This is mainly to the non-availability of the Infrastructure and complete value Chain Technology. Viz Weaving, Wet processing and Garmenting and Knitting. This is mainly due to establishment of the new infrastructure in new area leading to acute shortage of trained technical personnel. This was beginning of the change in technology in textile Industry this has not made any major changes in the educational systems in the country which is very essential for development of the Human capital. Earlier days education and Textile Industry thought about the inclusive growth. Now it is very difficult to think about the inclusive growth in Urban India. But rural India doesn't support inclusive growth country needs to develop inclusive growth systems from rural India. This is requirement of the country. All the major Textile production Viz Spinning, weaving, knitting, Garmenting and chemical wet processing are situated in rural India with poor Technology and poor Technological practices. 60 to 70 % of the production is still carried out in Handloom and old power loom sector and Textile Industry is yet to gear up for Modern power loom sector. Man-made fibre filament weaving is restricted to Surat Ahmedabad and few pocket of Bhivandi and Ichalkaranji. Few corporate industries are gearing up for modernization in Man -made Technology and few Technical textiles units are coming in various parts of the country. Surat is gearing up for 50,000 Shuttle less looms in next 3 to 4 years. The year 1980 saw paradigm shift of the Textile Industry from urban to rural India created acute shortage of the skilled Technical personnel to work in the Modern Textile Industry. Major corporate Industry viz Alok , Welspun Bombay Dyeing century Maral Trident etc Invested heavily in Modern Textile Industry and are facing acute shortage of the Trained Technical personnel to work on the production floor has affected organized sector. Development of the organized sector in rural India has started making impact on the traditional Industries because new organized Textile Industry has started capturing local domestic market. This has started giving tough competition to local Industry. Hence decentralized sector did not develop due to poor technology. Now the cost of Textile manufacturing is increasing day by day due to poor Technology available in the decentralized sector and competition from the organized sector because organized sector is dumping exports reject in domestic market. China is also dumping fabrics made from Natural and Man- made fibre at much lower cost. This has led to poor development of the weaving sector in man-made fibre sector. Our country is yet adopt new Technical Textile product. Even though we are having huge domestic market our Indian Textile Industry is yet to initiate. Most organizations in India facing lots of challenges and are in transformation phase and are unable to develop sustainable inclusive Model for business. This is possible to Develop if we think of training Technical people and Entrepreneurs to learn inclusive model and practice package of practices. Programs and curriculum is formulated in such a way that by the time students complete 3 years of their studies they would have been groomed for the skills required in the present technology. Further curriculum has 6 months in-plant training in textile Industry where he is given opportunity to work as supervisor in the modern Production unit.

Students passing out from this centre are taught by the highly qualified Teachers and groomed by the senior Technical personnel in various segment of the manufacturing Viz , Production , Planning , Maintenance , marketing quality control and Assurance etc. This kind of grooming by the senior Technical personnel has an added advantage to Industry as well as diploma graduates. Projects formulated in the Textile Industry needs to be followed for the concept of Root cause analysis. Based on the demand from the students to upgrade their knowledge and work in Textile Industry Btech Textiles program. Further, aim of the BTech textiles Technology programs is to develop Technical people to work in the top textile industries in India and world by giving exposure to latest technology used in Textile Industry. It aims to prepare the textile technologist to work for the adoption of technological developments happening in the developed Textile world. Technical graduates are getting basic knowledge and practical exposure to use IT tools and its applications in mfg. processes. Automation center in develops Multi-Tasking abilities required in Technical personnel's to work in present Technology used in the Textile Industry. Practical demonstration of the IT gadget applications in manufacturing processes is integral part of the BTech Textiles curriculum in Engineering education at MPTP campus. Textile Park has most modern Technology where it is housed with 800 shuttle less looms with production capacity of 1.5 lakhs meters of fabrics per day. Textile Industry where automation and optimum usage of the Technology is integral part of the MPTP campus.

II. Developing a Model Textile manufacturing incubation centre

Further, India is modernizing Textile Industry in the decentralized sector. A unique Textile Park developed in Shirpur Maharashtra India is a role Model for the entire country for the complete value chain in cotton with state art Technology. Top quality Textiles are produced for local and well as exports Viz Home Textile, Terry Towel, Shirting's and Knitted Garments. Major Textiles produced in this cluster exported to US and Europe Market. A rain water harvesting Technology developed and implemented in shipur is big boon to farming community has resulted in reverse migration of population from Gujarat and Madhya Pradesh migrated for education and employment. People coming in search of education, business development, employment. This technology is giving livelihood to all section of the society in Shirpur. Textile Park Shirpur is one of Role model in cotton value Chain. This model needs to be developed in different decentralized sector in India for various textile value chain, Viz. cotton, wool silk man-made fibre and new upcoming Technical Textile sector. NMIMS has produced many young Entrepreneurs to work for the development textile Industry in SHIRPUR rural India. In last one decade whole world is concentrating development of the Textile Industry where Modern Technology with competent Technical personnel are made available. In last one decade world Textile Industry shifted its major manufacturing hub to South East Asian countries. China India Bangladesh Pakistan etc. mainly due to availability of the cheap labor. Even though china is largest producer of Textiles it is withdrawing from Textiles due to other lucrative business in Electronics and automobiles sector. Hence whole world is looking for ultimate destination for the cotton Textile, Technical textiles and garment manufacturing Industry. It is being developed in South Africa and Ethiopia by setting up large scale manufacturing units. Major investment is coming from the developed world. Hence local industry entrepreneurs and technical people in South Africa needs Training with modern technology to work. This is boon to Textile Education and Research and Textile industries in India

III. Textile Research in India

Textile Research in India is done under Government supported schemes with Textile Industry Membership in ATIRA, BTRA SITRA NITRA and MANTRA. Funds allocation is meagre to meet the salaries of the poor quality scientists. These institutes have acute shortage of scientist and funds to work for the R and D projects. Focus in Industry driven research is lacking due to shift of the Textile Industry from the Research Centre. Almost all the research Institutes are suffering due to poor quality funding for R and D and Training. Even though MANTRA is close to the Industry it needs to come up with programs to meet the expectations of the world class research needed in India. Mantra is better placed compared to any Research Institutes in the country. For development of decentralized manmade fibre sector and Textile Machinery manufacturing, Man-made fibre filament production is integral part of the Surat Textile Industry supporting Mantra. Mantra should en-cash this. Important factors to be considered in developing research are Human capital development with Educational programs, Industry Participation in Engineering education and Research, Mentoring new breed of Entrepreneurs to connect corporate Textiles with decentralized sector to work in Tandem to develop Textile Industry, Formation of Industry clusters to support and identify R and D institutes' mandate and Link the textile cluster with good basic vocational & educational programs for different category of the people in the society. Emphasis on Development of Technical Textiles Manufacturing sector by grooming young Entrepreneurs in collaboration with various Top Textile Industries.

IV. Need of Automation in make in India

Textile industry is a sub-set of product-based industry. Hence, it will have all the ingredients of a product based industry, namely: Product development/R&D/Design, Process engineering/Pre-production/Process development Production/Manufacturing, Testing/Final Q.C/ Maintenance of Capital equipment used in Production, Servicing. R&D requires use of simulation packages from Textile engineers to simulate how Textile machinery uses Electronic Gadgets EMC and affects the electronic circuits (e.g. valve-timing). Optimize the process parameters for best performance of the Machinery used in large scale manufacturing process. Process engineering involves assisting the shop-layout designers in creating effective work-flow of material (assembly etc.) on a transfer line, which uses extensive automation and automation circuitry. Assisting in creating cost effective transfer lines is the main effort by using hardware/software/pneumatics/hydraulics etc. Production involves giving output as required in terms of numbers per shift. Effort required is to assist in creating monitoring network for measuring output of various parameters. Textiles products have lots variations in manufacturing process Small and even trending software makes monitoring simpler. Testing at the end of production is to ensure that output is meeting expectations. Hardware/software is required to measure only selected parameters independently (other than that done by Production) to assure quality to the end customer. Maintenance of all above equipment is a job by itself where an engineer learns the essentials of all the above equipment. Servicing Textile Machinery is getting highly automated today. Simple example is knotting, beam gaiting and replacement of the beam and change in quality in the various products are familiar. An inquisitive mind of a Textile Engineer with Multi-Tasking abilities in electronic gadget applications by engineer will assist in learning all facets of the Textile industry in a career-life-time and enable the engineer to learn, grow and earn respect in the industry. He will gain recognition in industry forums due to his knowledge and contribution and be valued by society.

V. Opportunities by Make in India

Textile value chain development by developing rural villages by creating industrial infrastructure for Cotton Growing farmers in Maharashtra, Madhya Pradesh and Gujarat. Corporate Textiles Industry can associate for Cluster development program, by incorporating Educational programs under IEDC Innovative Entrepreneurs Development Cell. Development of the Technical Graduate from Core Engineering to work for Textiles Industry. Industrial Automation and Optimization with support of Bosch Rexroth Laboratory can Train All the Engineering Graduates example Textile, Mechanical, Civil, EXTC, Electronics and Computer Graduates by associating with Textile universities. Top corporate Textile Industries to develop linkage with decentralized sectors. Textile Institutes programs- Diploma, BTech, and Entrepreneurs Development. Technical Textiles-International Tie –up for productivity improvement. Develop Multi-Tasking abilities required in Technical graduates, Entrepreneurs & owners from the Industries by training in Textile testing and quality control, Computer, IT, Extc, robotic and automation Laboratories. 15 Foreign university collaborations to establish Textile University in Gujarat can make impact on world investors. Need based Textile Industry Management program could be initiated under Mantra with IIM and Entrepreneurs Institutes support. Top corporate Textile Industries in India Alok Welspun Raymond Tridents Gokaldas etc. must associate with Research in India for development of Technical Human capital Development by their Participation in Textile Education. These educational institutes should be integral part of Textile parks in rural India to develop and groom Technical Entrepreneurs to invest in new Technology their by development Textile Industry in rural India

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